

WE CLAIM:

1. ~~A color liquid crystal panel characterized in~~
that:

 said color liquid crystal panel comprises on
one substrate of a pair of substrates which sandwich
liquid crystal,

 thin-film transistor elements arranged in
a matrix shape in correspondence with pixels;

 a wiring portion of said thin-film
transistor elements;

 a pixel electrode connected to said
wiring portion; and

 a color filter layer formed between said
pixel electrode and an inorganic insulating layer for
covering said wiring portion of said thin-film
transistor elements

 said color filter layer includes a lower
light-transmission flattened layer and a primary-color-
type colored filter pattern, and is provided an opening
through which a connection portion of said wiring
portion of said thin-film transistor elements and said
pixel electrode is penetrated; and

 a common electrode commonly used for plural
pixels is formed on the other substrate.

2. ~~A color liquid crystal panel characterized in~~
that:

 said color liquid crystal panel comprises on
one substrate of a pair of substrates which sandwich

liquid crystal

thin-film transistor elements arranged in a matrix shape in correspondence with pixels;

a wiring portion of said thin-film transistor elements;

a pixel electrode connected to said wiring portion; and

a color filter layer formed between said pixel electrode and an inorganic insulating layer for covering said wiring portion of said thin-film transistor elements.

said color filter layer includes a lower light-transmission flattened layer, a primary-color-type colored filter pattern and an upper light-transmission protection layer, and is provided with an opening through which a connection portion of said wiring portion of said thin-film transistor elements and said pixel electrode is penetrated; and

a common electrode commonly used for plural pixels is formed on the other substrate.

3. A color liquid crystal panel characterized in that:

said color liquid crystal panel comprises on one substrate of a pair of substrates which sandwich liquid crystal.

thin-film transistor elements arranged in a matrix shape in correspondence with pixels;

a wiring portion of said thin-film

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~~transistor elements;~~

a pixel electrode connected to said wiring portion; and

a color filter layer formed between said pixel electrode and an inorganic insulating layer for covering said wiring portion of said thin-film transistor elements,

said color filter layer includes a lower light-transmission flattened layer and a primary-color-type colored filter pattern, and is provided an opening through which a connection portion of said wiring portion of said thin-film transistor elements and said pixel electrode is penetrated;

a common electrode commonly used for plural pixels is formed on the other substrate;

said pixel electrode is driven by said thin-film transistor elements in response to an image signal; and

said liquid crystal is driven by a voltage applied between said pixel electrode and said common electrode to form an image.

4. A color liquid crystal panel characterized in that,

said color liquid crystal panel comprises on one substrate of a pair of substrates which sandwich liquid crystal,

thin-film transistor elements arranged in a matrix shape in correspondence with pixels;

transistor elements;

a pixel electrode connected to said wiring portion; and

a color filter layer formed between said pixel electrode and an inorganic insulating layer for covering said wiring portion of said thin-film transistor elements,

said color filter layer includes a lower light-transmission flattened layer, a primary-color-type colored filter pattern and an upper light-transmission protection layer, and is provided with an opening through which a connection portion of said wiring portion and said pixel electrode is penetrated; and

a common electrode commonly used for plural pixels is formed on the other substrate;

said pixel electrode is driven by said thin-film transistor elements in response to an image signal; and

said liquid crystal is driven by a voltage applied between said pixel electrode and said common electrode to form an image.

5. A color liquid crystal panel as claimed in claim 1 characterized in that:

said lower light-transmission flattened layer and said primary-color-type colored pattern are made of photosensitive resin.

6. A color liquid crystal panel as claimed in

~~claim 2 characterized in that:~~

~~said lower light-transmission flattened layer,
said primary-color-type colored pattern and said upper
light-transmission protection layer are made of
photosensitive resin.~~

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~~claim 3 characterized in that:~~

~~said lower light-transmission flattened layer
and said primary-color-type colored pattern are made of
photosensitive resin.~~

~~8. A color liquid crystal panel as claimed in
claim 4 characterized in that:~~

~~said lower light-transmission flattened layer,
said primary-color-type colored pattern and said upper
light-transmission protection layer are made of
photosensitive resin.~~

~~9. A color liquid crystal panel as claimed in~~

~~claim 2 characterized in that:~~

~~said lower light-transmission flattened layer
and said upper light-transmission protection layer are
made of thermosetting resin.~~

~~10. A color liquid crystal panel as claimed in~~

~~claim 4 characterized in that:~~

~~said lower light-transmission flattened layer
and said upper light-transmission protection layer are
made of thermosetting resin.~~

~~11. A color liquid crystal panel as claimed in~~

~~claim 1 characterized in that:~~

~~said lower light-transmission flattened layer~~
is a polyimide film in which a polyimide precursor
whose molecular terminal is end-capped is imidized by
heat-curing.

12. A color liquid crystal panel as claimed in
claim 2 characterized in that:

~~said lower light-transmission flattened layer~~
is a polyimide film in which a polyimide precursor
whose molecular terminal is end-capped is imidized by
~~heat-curing.~~

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13. A color liquid crystal panel as claimed in
claim 3 characterized in that:

~~said lower light-transmission flattened layer~~
is a polyimide film in which a polyimide precursor
whose molecular terminal is end-capped is imidized by
heat-curing.

14. A color liquid crystal panel as claimed in
claim 4 characterized in that:

~~said lower light-transmission flattened layer~~
is a polyimide film in which a polyimide precursor
whose molecular terminal is end-capped is imidized by
~~heat-curing.~~

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15. A color liquid crystal display apparatus as
claimed in claim 3 characterized in that:

~~an external electrode terminal provided every~~
~~wiring is covered with said inorganic insulating layer,~~
~~is covered with at least one of said lower light-~~
~~transmission flattened layer and said upper light-~~

transmission protection layer, and is provided on a substrate which has an opening for exposing said external electrode terminal portion.

16. A color liquid crystal display apparatus as claimed in claim 4 characterized in that:

an external electrode terminal provided every wiring is covered with said inorganic insulating layer, is covered with at least one of said lower light-transmission flattened layer and said upper light-transmission protection layer, and is provided on a substrate which has an opening for exposing said external electrode terminal portion.

17. A color liquid crystal display apparatus characterized in that:

on one substrate of a pair of substrates which sandwich liquid crystal,

thin-film transistor elements arranged in a matrix shape in correspondence with pixels;

a pixel electrode connected to a wiring portion of said thin-film transistor elements;

a common electrode arranged substantially parallel to a longitudinal direction of said pixel electrode and also along a direction substantially equal to a plane direction, and commonly used to plural pixels; and

a color filter layer formed among said common electrode, said pixel electrode and an inorganic insulating layer for covering said wiring portion of

said thin-film transistor elements, and including a lower light-transmission flattened layer and a primary-color-type colored pattern, are formed;

 said pixel electrode is driven by said switching element in response to an image signal; and

 said liquid crystal is driven by a voltage applied between said pixel electrode and said common electrode to form an image.

~~18.~~ A color liquid crystal display apparatus as claimed in claim 17 characterized in that:

 said lower light-transmission flattened layer, said primary-color-type colored pattern and said upper light-transmission protection layer are made of photosensitive resin.

~~19.~~ A color liquid crystal display apparatus as claimed in claim 17 characterized in that:

 said lower light-transmission flattened layer and said upper light-transmission protection layer are made of thermosetting resin.

~~20.~~ A color liquid crystal panel as claimed in claim 17 characterized in that:

 said lower light-transmission flattened layer is a polyimide film in which a polyimide precursor whose molecular terminal is end-capped is imidized by heat-curing.

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